

## V. REMARKS/ARGUMENTS

- STATUS OF THE CLAIMS

Claims 40, 41, 45, 47-55 are pending. Claims 47, 48 and the second Claim 53 are amended. Claim 55 has been newly added. Please note that because of a typing error prior to the issuance of the Office action there were the last two Claims are both numbered 53; accordingly, the second Claim 53 is amended to read Claim 54. The content of said Claim 54 has not been changed. Applicant asserts that the amended claims do not introduce new matter. Support for the amendments to Claims 47 and 48 are found in, among other places, at paragraph [0060].

- INFORMATION DISCLOSURE STATEMENT

Examiner has not considered AneuVysion and UroVysion since their publication dates are missing.

Applicant encloses a supplemental IDS and appropriate PTO 1449 containing the correct dates of the respective disclosures.

- OBJECTIONS TO CLAIMS AND SPECIFICATION

Examiner's Stance

Examiner makes formal grammatical objections to claims 45 and 47.

Applicant's Response:

Applicant has corrected the claims by amendment.

- REJECTION UNDER 35 U.S.C. §103

Examiner's Stance

Claims 40, 41, 45, 47-53 and 54 are rejected under 35 USC 103(a) as obvious over previously cited Ravkin (US 6,169,816) in view of Tisone, *et al.* (“Tisone”)(US 2004/0072364) (wherein amended Claim 54 was inadvertently also designated as another Claim 53). More specifically, the Examiner alleges that the primary reference to Ravkin discloses computer implemented imaging through bright field and fluorescence microscopy, while admitting that the cited reference is silent as to an automated application of specific tags or labels to select candidate target rare cells. The Tisone disclosure of a reagent dispenser allegedly remedies the deficiency in Ravkin.

In the Examiner’s opinion, the claimed automatic microscope system comprising a dispensing reagents is *prima facie* obvious over the combined references. Additionally, the Examiner alleges that dispensing a fluorescent reagent (claim 48) and moving a slide to a thermocycling station (Claim 52) is similarly obvious.

Further to Claim 48, Examiner alleges (last line of page 4 and first line page 5 of the Office Action) that Ravkin “further teaches that the microscopic system is computerized (column 5, line 66-67 to column 7, lines 1-5) ... compris[ing] processors that are linked with any number of peripheral devices (column 6, lines 1-7).”

- Applicant’s Response

Applicant disagrees. On the contrary, Applicant respectfully asserts that the fully automatic nature of the instant invention, both disclosed and presently claimed, represents a distinct difference and unique advantage over cited Ravkin and Tisone, taken singly or combined. By contrast, Ravkin’s semi-automatic imaging system or delivery system does not

disclose or even remotely suggest the instant automated microscope system as presently claimed. More specifically relating to Claim 47, steps (i) and (ii), and to Claim 48, the Examiner alleges (page 4 of the action): “slides are laid out with coordinates of reference points (column 4, lines 8-11, Ravkin). The system also comprises motor and lamp controllers (column 5, lines 8-25, Ravkin)”.

Applicant respectfully traverses the Examiner’s reading of the primary reference. In contrast to the instant automated means, the Ravkin reference, however, only provides a manual preparation of the slides. There is no disclosure of the claimed automatic placement of the slide on the stage or removal of the slide from the stage to or from a storage module, or even the automatic placement of the slide onto another device on the stage, such as a thermally cycling device (Claim 52).

On the contrary, the cited system is computerized only with respect to image analysis, but not automated with respect to placement, removal, or storage of the slide or even movement of the slide to a peripheral device on or off the stage. In fact, the Ravkin’s disclosure (column 6, lines 1-7) lists what he calls peripheral devices: “typically include a memory subsystem **67**, an input facility **70**, a display subsystem **72**, output devices such as a printer **73** and a file storage system **75**.” These cited devices would fail to motivate one of ordinary skill in the art to the instant invention. The cited combined references are silent on an automatic slide transporter moving a sample slide from a storage module to a stage and vice versa as presently claimed. New Claim 55 is directed to at one sensor associated with the location of the slide transportation from a storage module to a stage and back.

Concerning Claim 52 and also contrary to the Examiner's allegation, neither the Ravkin nor the Tisone reference, taken separately or combined, disclose nor suggest a means to move a slide automatically to a thermocycler or similar instrument. As mentioned above there is no means to accomplish or suggest this. All movement relates to imaging.

Finally, in view of the comments above, Applicant asserts that the instant claims are in a position for approval. However, in an effort to expedite prosecution, Applicant further limits Claims 47 and 48 to include steps (iv) and (v), respectively. This new step reads "transporting the sample slide to a storage module" and is supported by paragraph [0060] in the specifications. This further limits the instant invention with regard to its automatic features while further distinguishes it from Ravkin and Tisone. In summary, Applicant asserts that the instant claims as amended are in position for allowance.

First, Examiner opines that Ravkin discloses "techniques for interfacing the computer to external instruments" (page 6 of Office Action; Column 5, line 22-24). This is not relevant as this technology is restricted to optical performance as it refers only to programmed motion involving focusing (vertical) and movement from object to object within a field or from field to field (horizontal). In fact, the Ravkin reference is silent on the advantageous instant aspects of the claimed invention, such as automatic transportation of sample slides from a storage means onto the stage or from the stage to non-optical instruments on or off the stage such as a thermocycler.

Secondly, Examiner opines, "Tisone motivates one to combine such methods ... and that various configurations exist for the system (paragraph 0118 and 0119)" (page 6 of Office Action). Applicant traverses this reading of disclosure as incorrect because it is not even

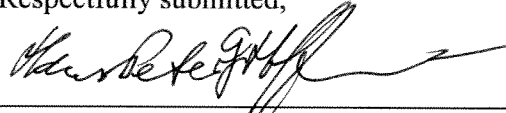
remotely relevant. In fact, Tisone in paragraph [0118] discloses "...EPROMS could connect to one or more microprocessors ... to provide signal to each electromechanical device" but then in the next paragraph [0119] only writes of various liquids and liquid handling permutations while remaining silent on adapting features outside of liquid handling. The "electromechanical device" in paragraph [0118] would not motivate one skilled in the art to conceive and reduce to practice the automatic sample preparation including substrate loading and staining or tagging the automatic microscopic operation according to the instant invention. The Tisone disclosure relates merely to management of liquid handling systems while the paragraph [0119] immediately following is concerned with additional permutations of dispensers. There is nothing in the secondary reference, alone or in combination with the primary invention, to motivate one skilled in the art to conceive the claimed invention, nor is there even a suggestion to combine with the primary. Therefore, Applicant asserts that Prima facie case of obviousness has not been made.

In view of the assertions set forth above, Applicant deems the rejection of claims 40, 41, 45, and 47-54 under 35 USC 103 improper and requests its withdrawal.

**CONCLUSION**

Applicants assert that this response is a good faith effort to place the application in condition for allowance. Applicants respectfully seek early allowance of the pending claims.

Respectfully submitted,



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